

THE NAVAL SAFETY CENTER'S AVIATION MAGAZINE

approach

May 2000



My Exploding-Head Ride

Curbside Service At

Kuwait International

5,000 VOLTS OF BLUE-ARC EXCITEMENT

approach

The Naval Safety Center's Aviation Magazine

May 2000

On the Cover

Volume 45 No. 5

Marines from 26th MEU
fast-rope from a CH-53E aboard the
USS Wasp (LHD-1).

Photo by PH3 Kenneth A. Pace.

RAdm. Skip Dirren, Jr.
Bill Mooberry
John G. Mahoney
Derek Nelson
Lt. Thomas Hamrick

Commander, Naval Safety Center
Deputy Commander
Head, Media Department
Editor-in-Chief
Head, Graphics Division

Approach Staff

Peter Mersky

pmersky@safetycenter.navy.mil

Allan Amen

aamen@safetycenter.navy.mil

John W. Williams

jwilliams@safetycenter.navy.mil

Ginger Rives

vrives@safetycenter.navy.mil

Letters and

Articles

Publications FAX

Cdr. Kimball Thompson

ethompson@safetycenter.navy.mil

LtCol. Thomas Meyers

tmeyers@safetycenter.navy.mil

Capt. James Fraser

jfraser@safetycenter.navy.mil

Homepage address

NAVSAFECEN BBS

(757) 444-3520 (DSN 564)

Editor

Ext. 7257

Graphics, Design & Layout

Ext. 7248

Illustrator

Ext. 7250

Distribution (Magazines and Posters)

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Commander, Naval Safety Center

Attn: Approach, Code 712

375 A St., Norfolk, VA 23511-4399

(757) 444-6791

Aircraft Operations Division

Ext. 7203

Aircraft Mishap Investigation Division

Ext. 7236

Aeromedical Division

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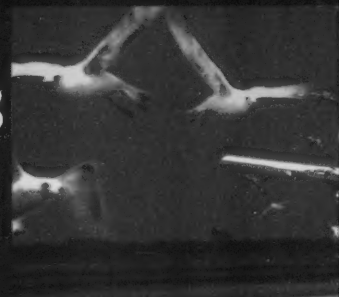
www.safetycenter.navy.mil

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Helo-Dunker Refresher— for Real!

We had gone from single-engine to dual-engine loss and full autorotation within two minutes.

by Lt. Ryan Christopher

What can you gain by having your crew chief or second crewman up and about in the aircraft troubleshooting an emergency at low altitude? Not enough! The day I ended up reenacting my helo-dunker refresher for real changed how I thought about crew responsibilities during an emergency.

I was not even an H2P, just a green PQM on my first sea deployment. We hot-seated and added an aux tank because the flight deck was going to secure for dinner, as is the custom on MSC ships. This type of flight had become routine with our detachment because our ship's civilian flight-deck crew also worked in the galley.

We briefed the flight, planning to go out for three hours of instrument work. I made an uneventful left-seat takeoff to the starboard side and began a gradual turn at 300 feet until the ops-normal report. It wasn't long into the turn when I got the aft and forward reports that everything was normal. I leveled my turn and headed for the 3-mile arc to begin a shipboard-TACAN approach.

We placed the aux tank in transfer mode but couldn't see indications of positive transfer from the aux tank. The second crewman reported a kink in the hose and tried to straighten it. Once he said he'd fixed it, we got good indications of transfer of aux-tank fuel.

As I made a right turn onto the arc at 2.5 miles, the crew chief asked me where the ship was. I responded, "Three miles off our three o'clock," and asked if there was a problem.

The crew chief said the No. 2 fuel filter had popped and would not reset. The HAC called for me to turn the aircraft back toward the ship, and I began fuel-contamination procedures according to NATOPS. The HAC started the first five steps of single-engine procedures and pulled out his pocket checklist.

While reviewing the procedures, the crew chief reported both filters had popped and would not reset. I called tower and asked for a green deck. Tower responded that it would take a few minutes to re-man flight quarters. Shortly after that, we lost our No. 2 engine. We were heavy with the extra gas but somehow maintained level flight at 300 feet. I did my best to maintain best single-engine airspeed of 70 knots.

I concentrated on getting back to the ship while the HAC finished the single-engine procedures. He dumped fuel from the no. 1 side and started the APU to try a restart. The HAC asked for dual concurrence on the No. 2 ECL and after asking me twice, I concurred. Before he could move the ECL to crank, I heard it get very quiet and noticed the gauges on the No. 1 side falling off. The


HAC took control and entered a full no-power autorotation.

I called out, "Mayday, mayday, mayday!" and flipped the No. 2 fuel-jettison valve. I called out, "Nr decreasing," and switched to APU power. We felt the familiar kick in the controls as the AFCS went off and back on.

We had gone from single-engine to dual-engine loss and a full autorotation within two minutes. Just before we hit, I somehow managed to remove my door. The next thing I knew, I was looking at my feet and struggling to get free of the sinking helicopter. After finding my HEEDS and relaxing, I managed to go through the egress steps just like we brief. Well, I forgot my ICS cord, but it came off in my fight to get out.

Once I surfaced, it became clear what I had neglected during the emergencies and my fixation with flying. I forgot about the aircrew in back and what they were doing. I saw the HAC after the waves lifted me, but I did not see the other half of our crew. I called out their names as I swam to the HAC. We spotted the second crewman and swam to him. We hooked up our lobes and began calling for the crew chief, but our calls went unanswered.

The second crewman later told us that the crew chief was still up in the back when we crashed. The second crewman managed to get seated before we hit but didn't get his seat belt fastened. The second crewman got out; the crew chief didn't.

I've heard that you learn the most from your mistakes and that hindsight is 20/20. I agree with both and encourage you to remember that the crew in back is relying on you. You're responsible for them. If you have a day like we had, everyone in your crew can escape, although they may be battered and bruised. This mishap resulted in an urgent warning that says crewmen must get seated and strapped in during emergencies. Stress this rule at every brief. 

Lt. Christopher flies with HC-5.

Photo-composite by Allan Hansen

Helo-Dunker Refresher— for Real

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Lt. Christopher flies with HC-5.



5K Volts of Blue-Arc Excitement

I thought about that light-blue arc and how close I came to being a conductor for 5,000 volts.

by Lt. Jack Van Natta

Of the five senses—touch, taste, smell, sight, and hearing—which one is most important to a naval aviator? After a recent near-mishap, I'd vote for hearing.

Certain sounds are unmistakable and inspire an immediate physiological response: the sound of a compressor stall, a stuck-flap actuator, or the zap of electrical arcing. On this flight, it was an unmistakable high-voltage "zap" that got my attention.

The flight was going to be my last in support of Operation Southern Watch. We were on station, awaiting the check-in of nearly 40 coalition aircraft, when the mission commander asked me to go into the E-2C's forward equipment compartment (FEC)—the area between the cockpit and the combat information center (CIC)—to reseal a power amplifier on one of our HF radios. I proceeded through the FEC toward the power amplifier, looking for anything out of the ordinary, a good habit to get into in an aircraft jam-packed with miles of electrical wiring.


Everything looked fine, and I started to seat the power amplifier. The HF power amplifier is on the left side of the aircraft, about two and a half feet across from the high-power section of the radar. As I was seating the power amplifier, I heard a loud zap behind me. For a moment, I hoped the noise just inches away from my right leg would disappear, but it didn't.

I turned around to see a four-inch electrical arc on one of the high-power radar boxes.

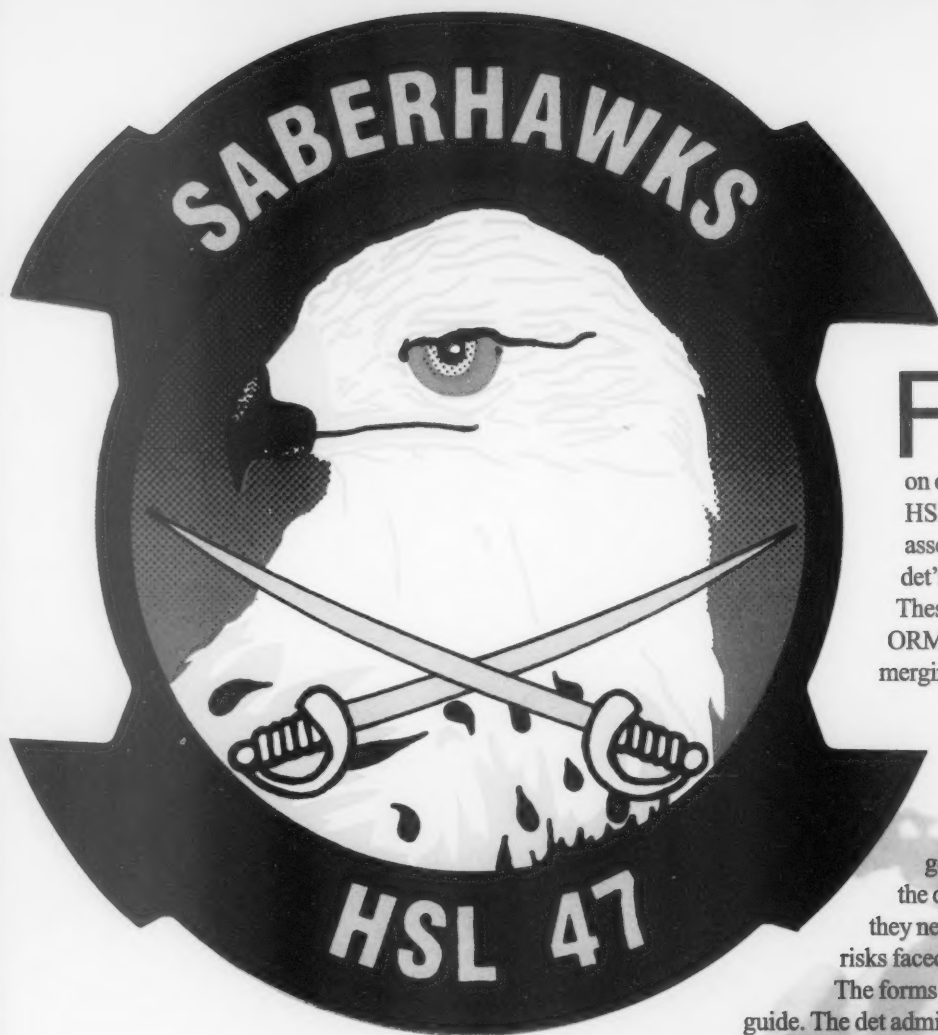
"This is not good," I thought. "This is definitely not good." Although this mission was important, I knew that I had to immediately secure power to the radar, a serious decision that would require handing our mission off to the airborne AWACS, but I saw no alternative. I decided to go back to the CIC and secure the radar from there even though I could have done it from the FEC. I did not want the mission commander to think that the radar had simply shut itself down and reenergize the system without hearing my explanation.

While I secured the radar, I told the mission commander what I had seen. He agreed with my decision and passed the strike off to the AWACS.

After landing, I sat down and seriously thought about my experience. I thought about that light-blue arc and how close I came to being a conductor for 5,000 volts. Postflight inspection revealed that the connector on the line carrying the 5,000 volts to the box in question was shorted about one inch from its connection point. The connector on this same radar box responsible for sending an overcurrent-overload signal to the radar circuit-breaker panel was also broken. The radar was in overload, but did not know to shut itself down. Had we not secured the radar when we did, we could have had a fire.

Although we did not control the strike that day, we were able to remain airborne and on station, assisting the AWACS in many other ways. 

Lt. Van Natta flies with VAW-117.



Fully aware of the myriad ways people compromise personal safety and security on overseas liberty, the OinC of HSL-47's Det 4, devised a risk-assessment plan to use during his det's WESTPAC deployment. These Foreign Leave and Liberty ORM forms were developed by merging detachment, theater

commander and USS Ford's (FFG 54) liberty policies with the squadron's existing risk-assessment program. The goal was to give everyone on the detachment the information they needed to mitigate the various risks faced by U.S. sailors abroad.

The forms originated as a briefing guide. The det admin officer collected the required information for each port and briefed all hands before liberty call. Critical information (such as ship phone numbers and beach guard location) was reduced to a wallet-sized card for each det member.

To help people focus and to formalize the process, the forms in this article were developed and used in conjunction with the brief and wallet card. This approach became a quick, efficient way to give each member the information needed to stay safe and enjoy liberty. The result was the detachment had a great deployment with zero liberty incidents, and just as important, they had a lot of fun.

Saberhawk ORM

Saberhawk Foreign Leave-Liberty Risk Management

Section I: Awareness

Circle your response:

A B

1. Have you read and understood the command's liberty policy for this port?

Yes No

Note: It is your responsibility to read and understand the command's liberty policy for each port, as detailed in the POD or separate instruction.

a. Do you know the liberty port's off-limits/safe areas?

Yes No

b. Is the buddy system mandatory and/or will you be using the buddy system in this port visit?

Yes No

Note: There is safety in numbers, regardless of whether the buddy system is enforced.

c. Do you know the prohibited activities?

Yes No

d. Do you know when liberty expires?

Yes No

Note: It is your responsibility to know when liberty expires, both on your duty day and at the end of each port visit. At liberty expiration you shall physically muster with the LPO or duty section personnel.

2. Are you familiar with the threat assessment for this port/location?

Yes No

List the three highest risks for this liberty port:

a. _____

b. _____

c. _____

3. Are you aware of the sexually transmitted diseases (STDs)/HIV infection rates for this port?

Yes No

4. Do you know the local money exchange locations and rates?

Yes No

5. Are you familiar with the local transportation system?

Yes No

6. Have you been granted permission for overnight liberty?

Yes No

Note: It is your responsibility, if granted overnight liberty, to leave a valid recall location and phone number with duty section personnel. You shall update both if your location or situation changes.

a. Have you made arrangements for lodging?

Yes No

b. Did you leave lodging and telephone information with the duty section?

Yes No

7. Are you familiar with the liberty port's customs?

Yes No

Note: You are an ambassador of our country; as such, you shall behave responsibly and be sensitive to the host country's customs. Failure to do so will not only affect your stay, but may negatively impact visits to this port by other Navy vessels.

8. Do you have the command and emergency phone numbers readily available?

Yes No

Note: It is your responsibility, before leaving the command, to know the phone number to the command, the location where it is moored/anchored, and the name/location of the fleet landing if applicable. You will be provided this information on a wallet-sized card, which must be in your possession while on liberty.

Section II: Risk

1. Do you intend to drink alcohol during your liberty?

No Yes

2. Will you be operating a motor vehicle or riding a bicycle?

No Yes

Note: It is your responsibility to possess a valid driver's license (i.e., international license) and abide by the traffic laws of the host country in which you will be operating a motor vehicle.

3. Do you intend to carry valuables during your liberty (i.e., cameras, expensive jewelry, large sums of money)?

No Yes

Note: If you are, do so inconspicuously and avoid becoming a target for crime.

4. Do you intend to participate in sport activities?

No Yes

If you circled any column B responses, you need to take action to increase your awareness and/or minimize your risks.

Name: _____ Date: _____

HSL47 FORM 1050/2 (2-00)

continued on page 19

Is the Skipper in His "Box" Yet?

by Cdr. Anthony J. Rizzo

Five minutes to walk before a 1 v 1 ACM training flight. The weather was perfect, the brief was textbook, the jets were ready, and maintenance control was standing by. Everything was on track until I turned the corner and headed to my office from the briefing room. There, waiting for me with better-talk-to-the-skipper-about-this-one looks on their faces were my XO, MO, CMC, and the 200 Division chief.

The MO confirmed my suspicions that they weren't there just to wish me a good flight when he asked, "Are you in your 'box' yet, skipper?" Good question. Was I in the "box" (sometimes called the "bubble") and already compartmentalized, mentally focused on my flight, and should therefore avoid any potential distractions? Or should I risk an intrusion and get a quick dump on whatever was important enough to bring a significant chunk of the chain of command to my office doorstep?

My half-serious, half-joking response to the MO, "I'm not in my 'box' until I climb up the ladder," is true for many of us. At times,

our billets demand it. Certain decisions just can't wait until after the flight. In this case, the situation did require an immediate decision from Rocket 1. A quick call to maintenance control to slide the launch 15 minutes saved the training sortie, and we kept the problem from escalating.


It made me think more about what distractions I should allow so close to man-up. When do those distractions mean it's time to give your flight to the JO hanging around the SDO desk looking for that second hop of the day?

Back in T-34s, I entered my box the moment I left the Q. I didn't leave it until I shut down the engine in the chocks after landing. As we gain experience in our flying careers, we quickly learn how to jump in and out of our boxes. We learn to tune out distractions when it's time to focus on flying. We even have designated briefing rooms or areas where we can sequester ourselves to better concentrate on the upcoming mission. As we head toward maintenance control to sign for the jet, we make the mental shift from naval officer to naval aviator.

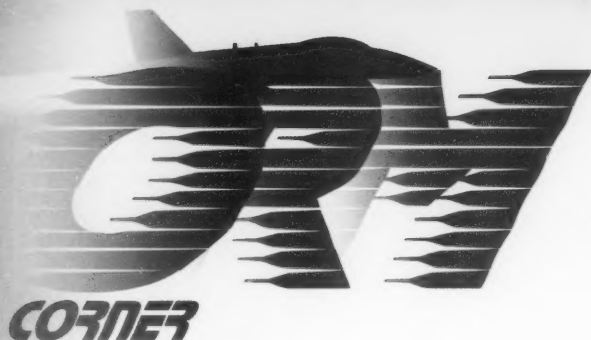


How and when you enter these boxes become important factors in how well you are able to compartmentalize before going flying. This process of compartmentalization is, in reality, a self-evaluation using ORM principles. Countless occurrences in our professional and personal lives could be identified as hazards if they have the potential to distract you in the air. Assessing the risk to determine what intrusions you should allow into your bubble is hard. That requires making risk decisions. Ask yourself: Is the potential risk to my concentration and performance worth getting through a few more folders in the in-box or taking that last-second phone call from the detailer who wants to discuss that disassociated tour that happens to fit your career timing perfectly? What do you do if, while you are briefing,

admin hands you a message that your spouse called while you were briefing about some “plumbing problem” that’s already been fixed so “...don’t bother calling me at home right now because I’ll be at the carpet store for the next few hours”?

If distractions do occur or can’t be avoided, implement controls. Delay the launch if you can and tackle the issue now. If you have to, bite the bullet, take yourself off the flight schedule and handle the problem. If nothing else, you won’t be thinking about what you shoulda, woulda, coulda done as you hit the merge. And finally, supervise yourself once airborne. Make sure you’re focusing on the task at hand and not about what awaits you after the flight. 

Cdr. Rizzo was the CO of VFA-204. He is now on the staff of Commander, Naval Air Reserve Force.



ORM Corner is a bi-monthly department.

Please send your questions, comments or recommendations to Mr. John Mahoney, the ORM coordinator at the Naval Safety Center, or to Capt. Denis M. Faherty, Director, Operational Risk Management. Mr. Mahoney's address is: Code 70, Naval Safety Center, 375 A St., Norfolk, VA 23511-4399. DSN 564-3520, ext. 7243. Comm: (757) 444-3520, ext. 7243. E-mail: jgmahone@safecen.navy.mil
Write Capt. Faherty at OPNAV Code N-09K, 2000 Navy Pentagon, Rm 5E-816, Washington, D.C. 20350-2000. DSN 224-8430. Comm: (703) 614-8430. E-mail: faherty.denis@hq.navy.mil

by Lt. Matt Roberts

We launched from Norfolk in our Sea King in perfect weather for a multiple-drone recovery mission. We had clear skies with unrestricted visibility. Both the pilot in command and I were qualified HACs. The other HAC and crew chief were experienced in the H-3 but had just qualified for the drone-recovery mission. Our second crewman had minimal experience in the aircraft, having recently completed the Fleet Replacement

when we tried to recover the second drone. The drone's parachute had deployed and released late, causing it to land in the water approximately 50 yards upwind of the shape, instead of farther away from the recovery area. The safety boat was also out of the immediate vicinity because of the improper deployment of the parachute.

With the parachute's relative position to the drone, and the fact that it was submerged, we were sure the chute had completely separated from the drone and thought it would not be a factor in the recovery.

As we hovered over the drone, the rotor wash slowly pushed it toward the parachute. The HAC was flying from the left seat, and he couldn't see the drone drifting toward the parachute, which tangled


in the shroud lines as the drone was snared.

Unable to disentangle the shape from the shroud lines, our crew chief offered to use the hoist to free the drone. The crew agreed. Once in the water, the hoist promptly snarled in the parachute's shroud lines.

Aircrew syllabus. I was halfway through the qualification process, needing three more recoveries for the qual. Our destination was the warning area east of Dam Neck, where we were tasked to recover three drones.

We flew to the operating area and recovered the first drone. Our problems started

The Chute That Nearly Ruined My Day



With the drone and hoist now tangled in the chute, our crew chief tried freeing the hoist by raising the hook a little out of the water to shake the lines loose or even cut them. But this action put tension on the parachute lanyard, allowing the rotor downwash to partly inflate the chute.

Fearing the parachute would further inflate and rise up into the rotor blades, the HAC ordered the crew chief to guillotine the hoist cable. The crew chief immediately reached over and flipped the shear switch. The cartridge-activated device did not fire immediately, but by the time it did, the hoist cable was under tension from the parachute, making the cable hit the right sponson as the cable separated.

Guillotining the hoist cable had the desired effect and the drone disentangled from the parachute. With no damage other than a small tear in the sponson, we continued the recovery operation without further incident.

Although damage to the aircraft was minimal, several contributing factors could have conspired to make it worse.


First, we pressed on with the recovery with the parachute near the drone. The recovery was not urgent enough that we needed to take such risks. We should have reported our position to the range master and allowed the safety boat time to report on station to retrieve the parachute, thereby ensuring a normal recovery.

Second, the pilot flying the helo was in the left seat and couldn't monitor the parachute

as the drone was being snared. The other pilot and both crewmen were focused on the drone-recovery training and failed to maintain situational awareness of the approaching chute.

Third, when confronted with the entanglement, the crew agreed to use the hoist to free the drone. We did not fully evaluate the risks associated with this nonstandard procedure, unnecessarily risking damage to the aircraft and injury to the crew. The decision to jettison the hoist cable was sound, but was required only after an ill-fated decision had been made that damaged the aircraft.

Essentially, our crew had a breakdown in both aircrew coordination and ORM. Each year all flight personnel undergo aircrew coordination training to minimize the potential for damage to aircraft and injury. A review of these principles reveals our crew was weak in a number of the areas including situational awareness, decision making and communications.

ORM helps you recognize risks. There are three application levels, with the lowest level being a time-critical analysis of the situation and hazards involved. We failed to fully use this level of ORM and did not adequately identify and assess the potential hazards associated with performing the recovery in the vicinity of a parachute. Without having identified and assessed those hazards, we couldn't make proper risk decisions. 

Lt. Roberts flies with HC-2.

How long does it take to get deep into the Black Hole—5, 10, 15 seconds? That depends on how slowly you move from altitude to ground zero.

It was a dark night with no moon and enough haze to call it actual IMC. After an uneventful early morning flight, we headed home for a 0130 land time and some well-deserved sleep. Each pilot had flown during the flight and was feeling fine.

As the ship set flight quarters, we made a few practice approaches for currency and training. We started our descent at 200 feet, approximately a half mile behind the ship.

As my H2P shot the approach and called for the descent, I called, "Roger, descending, you're left of line-up. Ship's moving at ten knots. Tower, turn up the line-up and drop lights. Down on the SGSI." Somewhere in the background, I vaguely remember my sensor operator's 100-foot call. We were too busy talking or fixating on external elements.

Neither of us heard our associated variable-index, low-altitude warning on our radalts, and no one remembers the sensor operator's 50-foot call. As I looked inside, I saw the altimeter going through 20 feet.

"Power, power!" I called, as I pulled enough collective to get us climbing with low-rotor warnings and a ship somewhere in front.

What had just happened? Was everyone OK? After leveling off at 1,000 feet and clear of the ship, we realized we almost hit that big, Black Hole. How? We had been so careful. Yet, uncooperative landing lights, fixation, and loss of situational awareness nearly did us in.

I can't tell you how fast it occurred because it only took seconds to put us into that situation. We estimate we were at 40 knots and 10 feet before we put power on the aircraft. But I can tell you it took minutes to calm down enough to land and hours before we regained our composure.

Somehow, another aircrew had cheated the Black Hole. We had broken the event chain and got our helicopter back to level flight, thanks to our training. Keep on your toes and keep your scans moving because it's wait-ing for you. Don't let your crew be the next to enter the Black Hole. ➤

Lt. Gerace flies with HSL-46's Det 5.

What Black Hole?

I can't tell you how fast it occurred because it only took seconds to put us into that situation.

Photo: composite by Allan Amen

Got To Pull the Pins

I started the before-takeoff checklist, but as I called to arm the seats, I couldn't arm mine.

by Ltjg. Pete Wood

Throughout most of my time at the EA-6B FRS, I was mystified by the policy of ECMO 2 or ECMO 3 pulling the command-sequence, gas-generator pins from the forward ejection seats on preflight. I understood the function and the importance of the gas-sequencing mechanism (they control the ejection-delay sequence of each seat), but what made these pins so much more important than the other?

As I pulled these "special" pins for each of my backseat flights, I wondered, "Won't these pins be pulled by the front crew along with the rest of the seat pins? After all, the pilot and ECMO 1 have to arm their seats as part of the before-takeoff checklist, and all their pins will be stowed anyway, right?" Well, I got the answer to this mystery on one of my last flights at the FRS.

I was preflighting for a night flight as ECMO 1, and we were a bit rushed because our brief ran long. I had a routine system for checking the ejection seat, parachute and seat pan. I started from the top and worked my way to the bottom. Halfway down the seat preflight, I was distracted, and I rushed into the jet. I began my cockpit preflight. We then started engines, contacted clearance for the flight, and began to taxi. I started the before-takeoff checklist, but as I called to arm the seats, I couldn't arm mine. I had forgotten to pull the pins in the lower ejection handle and in the emergency-restraint release handle. The light of reason came on.

What if I had pulled the ejection-handle pins and had forgotten one of the others? I would have been able to arm my seat and we would have gone flying. What if the backseaters hadn't pulled the gas-sequence generator pin? If we had had to command eject, those still-installed pins would have kept ECMO 2 and ECMO 3 in the jet.

Since I've been in the fleet, I've noticed a more cavalier attitude toward getting those special pins pulled by the backseaters. If the importance of

PH3 Brian Fleske



following SOP in this regard hasn't been clear, I hope this tale will dramatize the importance of pulling those two pins for everyone.

This story also sheds light on a recurring problem in aviation: Rushing through any phase of the flight usually translates to missed steps and an unsafe situation. If you feel hurried, you are hurried, and the light should come on that you need to stop, wind the clock, and finish your tasks thoroughly and carefully. ✈

Ltjg. Wood flies with VAQ-131.

A “Minor” Emergency



by Lt. Tim Urban

I was in the E-2 FRS. Several flights with the squadron NATOPS guru and E-2 Group 0 Model Manager had made me appreciate systems knowledge and the importance of knowing everything about the aircraft. But, there are some things a pilot cannot prepare for before a flight.

During an FCLP det at Key West, the high temperatures and busy flight schedule put unusual stress on our already overworked aircraft. After several days, the fledgling aviators and experienced instructors settled into a routine. I had encountered minor emergencies that amounted to little more than a MAF and a quick fix. Today's flight would prove different.

Scheduled as the hot-switch pilot, I seized the opportunity to relax and visualize my pattern for that afternoon and the upcoming



CQ det. After an hour, I walked to the line and got into my tired aircraft, ready to take hits for a couple of OK passes. The instructor in the right seat had a great attitude and was eager for us to learn. Unfortunately, with a det of F-16s and FA-18s to contend with, our Hawkeyes were subjected to long deltas and what amounted to the equivalent of the infamous "Hummer Dance." We raised our landing gear to save gas and lowered them when the tower called Charlie.



PHAN Michael B.

After two passes, I began to feel comfortable, but with only four left in the period, I needed to string together a few consecutive passes to restore my confidence. As we rolled out on our downwind heading for a third pass, all seemed normal. With the landing checks complete, we slowed to on-speed approaching the 180. At that moment we saw master-caution and maximum-rudder lights. The E-2 has a system that limits the rudder throw to avoid overstress.

I called out, "Max rudder, no others," and punched out the light. Simultaneously, we saw a hydraulic-combined low-light and an associated drop on both combined-system pressure gauges. By this time we were approaching the 135. We could hear a loud whirring from cavitation of the combined pump in the port nacelle, alerting us to the risk of fire. Smoke from burning hydraulic fluid poured from the engine, increasing the risk of a flameout and single-engine ops.

My instructor calmly declared an emergency while I continued the approach turn. The E-2C PCL contains no


boldface items for failure of one hydraulic system, so I was left to fly a good approach and think about the possible outcomes of the situation. Inside the 90, we realized the guy in back (another student) was pressing us for a situation update. We told him to be quiet—not the best example of aircrew coordination. Fortunately, we had extended the gear and flaps. My instructor took the controls turning to the 45, and I began reviewing what would happen on the ground: what subsystems we would have and what procedures we would follow.

The actual landing was uneventful. Without hydraulic subsystems, we slowed and steered the aircraft with differential power, coming to a stop on an off-duty runway.

With the aircraft chocked by the crash crew, my instructor ran through the secure checks from memory, turned off the boost pumps and generators, and tried to secure the engines. However, the emergency generator is a combined-hydraulic subsystem, which was lost with the initial system failure. Shutting down the generators would mean we wouldn't secure the engines via the T-handles or fight any engine fire with the extinguishers.

After a second of deliberation, he pulled the condition levers to the ground-stop position. This position is also electrically controlled, so the engines kept running. He finally realized this second mistake after we looked at each other and said a few expletives. We secured the engines by pulling one condition lever to feather (effectively starving the engine of fuel), removing that lever from the feather position, and finally pulling the other condition lever to feather. We then left the aircraft via the main entrance hatch; another mistake made because of a lack of crew coordination and planning, since the port engine still presented the danger of fire.

Outside, hydraulic fluid continued to pour from the engine and pool on the deck. We later discovered that 14 gallons of hydraulic fluid had spewed out in less than five seconds at 3,000 psi from a slit the width of a paper cut in one of the original aluminum hydraulic lines. The slit had been caused by a spacer meant to prevent chafing on the line.

Though this emergency may seem minor, it was my first look at how fast a situation develops that can kill you. Lessons learned include the absolute necessity of knowing emergency procedures cold, the importance of good aircrew coordination in multi-piloted aircraft, the invaluable knowledge of systems, and the ability to react quickly and calmly in a situation that may last only seconds. 

Lt. Urban flies with VAW-124.

Is It LUCK or JUST ME?

by Lt. Greg Robinson

Lately, my flying life has become too interesting. Writing this article is an attempt to end my recent plague of engine problems. At this point, I'll try anything! They're calling me "Black Cloud." No one wants to fly with me or be my friend. Dogs see me and start howling inconsolably. My image doesn't show up well in mirrors and photographs...



Cartoon by Allan Amen

Our squadron maintenance and safety stats are just fine, but it seems when I'm on the flight, something goes wrong...Help!

It was a beautiful, clear, spring day over the Med. We'd been airborne for an hour, and had settled into the C-130 over-water routine: The flight engineer quizzed his trainee, and the copilot monitored the radios. I ate lunch while keeping an eye on the instrument panel.

A sudden movement caught my eye. The No. 4 gearbox oil-pressure needle was bouncing like a spin caster with a bass hooked. I pointed at the gauge, tossed my sandwich aside, and announced over the ICS, "Mmrmpph?" In seconds, we watched the oil quantity drop toward zero. The low-oil light came on. Time for my first engine shutdown!

The procedure went smoothly. We had no cargo, plenty of fuel, perfect weather, and were three hours from our det site. We continued home and landed.

In 1,500 flight hours, I'd experienced only one in-flight emergency: a false bleed-air light in a C-12. I knew that some day, I would see a real emergency, and wondered occasionally how I would react. Simulators provide excellent training, but they're not the real thing. This engine failure was reassuring. After an initial heart thump, training and aircrew coordination took over, and we handled the emergency. Nice, but more reassurance was in store.

In June, I was in the right seat, back in CONUS. We'd just left New Orleans and were working the post-takeoff checklist. The loadmaster paused at "wings and aircraft interior."

"Uh, sir, something's dripping out of the number two drain mast. Looks like fuel."

No matter what it was, if it was leaking, we had to shut down the engine. Back at New Orleans, we fixed our seeping manifold drain valve.

In late August, I went to bring a bird home from rework. It was shiny and smelled like a new car. Our FCF was flawless, and we signed the acceptance paperwork, and loaded our bags to go home. Just as the landing gear came up, the No. 3 nacelle's

overheat light came on. Bleed-air leak—a serious emergency in a C-130.

While the copilot and flight engineer secured the engine, I declared the emergency. A 90-270 turn and good aircrew coordination brought us to a smooth landing, seconds after we finished the last of our checklists.

The rework crew apologized profusely. They helped us locate and tighten a loose bleed fitting in the nacelle. But two hours later, almost home, the same warning lit up again. We shut down the engine a second time, isolated bleed air from the right wing, and pressed on for another three-engine landing at home plate.

These were all simple, uncomplicated emergencies. All happened in daylight VFR, with no cargo or passengers. That was about to change. In early November, we were fully loaded with 50 Marines, two cargo pallets, and enough fuel to reach Hawaii. We'd settled into our over-water routine again, but this time, I was the one reading a magazine and working the HF. An FE trainee worked the panel, fielding questions from his instructor. Two hours out of Point Mugu, engrossed in a dissertation on the relative merits of various lob wedges, I saw an amber light blink. I stowed my magazine and watched for it again. This time, it stayed on for a half second. It was the utility-hydraulic suction-boost pressure light.

"Hey, chief, are you simulating a hydraulic problem?" Dumb question. The light came on a third time.

"No, sir, that's real. Shut 'em off."

I secured all the hydraulic pumps for the utility system. The load master soon reported that the utility reservoir was empty. Somewhere, we had a big leak.

The FE spoke up. "Sir, we've got fluid coming out of number one."

Faint, red streaks trailed back from the access panels on the nacelle.

"OK," I said, "that's a visible fluid leak, so let's secure number one." The shutdown went smoothly, but presented new problems. We were entering an area of IMC, near the top of an icing layer. I declared our emergency with

Oceanic, and requested a return to Point Mugu. They asked for our preferred routing. In the time it took to pick up the chart and locate our position, our HF antenna iced up. We could no longer transmit—just receive. Oceanic became increasingly concerned about our lost contact and began asking airliners for relays.

Meanwhile, we quickly realized that we could not maintain altitude with a full load, deicing systems running, and only three engines. But there was an airliner somewhere behind and below us. Oceanic had

just told him he could climb when he'd passed us. We didn't want to make an uncleared IMC descent into his path. Time for some ORM.

We turned 90 degrees for our descent, planning to head for the mainland between airways. Our descent immediately brought us into moderate icing and moderate turbulence. The pilot had his hands full just flying the aircraft. I monitored the HF and plugged GPS points so he could navigate. The FE monitored systems and kept the icing under control. A third pilot sat at the nav table, handling VHF comms with airliners. The aircrew in back took care of our airsick Marines. Once we were stable, we reviewed our checklists and systems to make sure we didn't

forget anything. Eventually, we restored utility hydraulics, dumped fuel, and made a smooth 3-engine landing at Point Mugu. That flight ended uneventfully, but my streak continued.

In January, we were above Colorado, headed for the East Coast from San Diego. I was admiring the unlimited visibility in the crisp winter air. Suddenly, I noticed a steady red light.

"Uh, we've got a fire light in number two." The FE and I did a quick scan of the engine instruments as the pilot stowed his newspaper. The gauges looked normal.

The pilot said, "You two shut it down. I'll take the radios." With FE concurrence, I pulled No. 2 to feather. The loadmaster came over the ICS.

"Number two looks good. No smoke or leaks or anything."


"OK," I said, "Confirm number two fire handle?" The FE agreed, and I pulled the T-handle. The loadmaster came on again.

"Number two is standing tall. Good feather."

I continued, "There are no secondaries. Let's hold the fire bottle." The FE and loadmaster immediately agreed. We completed the engine-shutdown checklist per NATOPS and isolated bleed air from the left wing. As we had suspected since the loadmaster's first ICS call, the fire light was a false indication. It remained on and steady until we landed in Dallas—the closest divert with good weather and C-130 assistance.

Six emergency engine-shutdowns in less than 180 flight hours. Different aircraft, different engines, different causes, different crews. Five of the six shutdowns were real emergencies—not false indications. But superb aircrew coordination, excellent communication, and complete systems knowledge kept everything under control. Truly, we make our own luck.

What have I learned from this? In our business, emergencies are inevitable. From the first day of flight school, we learn to expect the unexpected. We study, we practice, we review. We keep an eye on the instrument panel. But we can't escape human nature. In quiet periods, we drift toward overconfidence. After we face a real emergency, we either pat ourselves on the back or look accusingly in the mirror; but we assume our turn in the barrel is over for a while.

Instead, we must understand and remember that every flight is a new toss of the dice. We must stay ready. I've experienced an extraordinary statistical fluke in the past months. Was it any more extraordinary than my previous 1,500 hours, with no emergencies? It definitely made me a better pilot. 

Lt. Robinson flies with VR-53.

Oceanic became increasingly concerned about our lost contact and began asking airliners for relays.

Saberhawk Individual Leave-Liberty Risk Assessment

This risk-assessment worksheet is designed to generate greater awareness of your personal level of risk based on various factors. Leave and liberty are notorious times for accidents/injuries, at home and on the road. To determine your level of risk while on leave or liberty, answer the following questions as factually and honestly as possible. After completion, please route this worksheet with your leave-liberty chit.

Circle the response

- | | |
|---|---------------|
| 1. Are you less than 25 years old? | A B
Yes No |
| <i>Fact: The 18-to-24-year-old age group is the most vulnerable group in the Navy for motor-vehicle mishaps. Motor-vehicle crashes are the leading cause of death for every age from 6 to 25 years.</i> | |
| 2. Are you married? | No Yes |
| <i>Fact: Unmarried persons are twice as likely to be involved in serious car accidents. In 1996, 40,115 people died in highway crashes, the equivalent of a jet crash killing 100 people daily.</i> | |
| 3. Do you ride a motorcycle? | Yes No |
| <i>Fact: In 1996, 42 percent of all motorcyclists involved in fatal crashes were speeding. Forty-three percent of the fatally injured motorcyclists and 55 percent of the passengers who were killed were not wearing helmets.</i> | |
| 4. Has your car/motorcycle been inspected recently? | No Yes |
| <i>Fact: Road dirt can reduce the effectiveness of your lights by as much as 90 percent.</i> | |
| 5. Do you and your passengers use seatbelts/baby seats (as applicable)? | No Yes |
| <i>Fact: From 1975 to 1996, it is estimated that safety belts saved 90,425 lives, including 10,414 lives saved in 1996. A government-approved child-restraint device reduces the chance for serious injury 60 to 70 percent and of fatal injury 70 to 90 percent. An unbelted child has the same chances of surviving a 30-mph crash as a fall from a three-story building.</i> | |
| 6. Do you drive after two drinks? | Yes No |
| <i>Fact: In 1996 there were 17,126 fatalities in alcohol-related crashes, which represented 40.9 percent of the traffic fatalities for the year and an average of one alcohol-related fatality every 31 minutes.</i> | |
| 7. Are you currently under medication that causes drowsiness? | Yes No |
| <i>Fact: Medication can impair your quick reaction and decision making ability in the same manner as alcohol. Alcohol combined with medication may increase this impairment by two to four times.</i> | |
| 8. Will you get a normal period of sleep before you drive? | No Yes |
| <i>Fact: Alcohol, drugs, and fatigue are the major causes in the Navy for motor-vehicle accidents.</i> | |
| 9. Do you intend on traveling during your leave/liberty? | Yes No |
| <i>Fact: On average, 115 persons a day died in motor-vehicle crashes in 1996—one every 13 minutes.</i> | |
| 10. If you plan on driving on a trip: | |
| a. Are you driving alone? | Yes No |
| b. Are you driving at night? | Yes No |
| c. Are you planning to drive more than 450 miles a day? | Yes No |
| 11. Do you plan on participating in recreational activities on your leave/liberty? | Yes No |
| <i>Fact: Every year, approximately 2,600 Navy military personnel participating in recreation, athletics and home activities are injured or killed.</i> | |
| 12. Do you have the proper safety/protective equipment for each activity? | No Yes |
| 13. Do you conduct these activities frequently? | Yes No |
| 14. Did you receive a grade of Excellent or better on your last PRT? | No Yes |
| <i>Fact: Average annual Navy losses involving physical fitness amount to five deaths, 77 injuries, 687 lost work days, costing \$439,000. The deaths occurred after strenuous physical activity. The injuries involved the back, shoulders, arms, and legs.</i> | |

Total column A responses _____ X 5 = _____ points

Name: _____ Date: _____

60 points VERY HIGH RISK 40-59 points HIGH RISK

20-39 points MEDIUM RISK 0-19 points LOW RISK

If your risk category is VERY HIGH, HIGH, or even MEDIUM, you should take some action to reduce your risk.

HSL47 FORM 1050/1(2-98)

by LCdr. Mark D. Lane

On a recent flight, I was the copilot for a mission in which we were transporting civilian VIPs from a large, busy civilian airfield to a small, uncontrolled civilian airfield near a military base. Coming from a TACAIR background to the C-9, this was my first experience flying into an uncontrolled field. I had read about UNICOM procedures in the *AIM*, but not recently, and not in detail. As a result, I was only generally familiar with the procedures that general-aviation pilots use constantly. We did not brief anything out of the ordinary for this flight, and I didn't tell my aircraft commander that this was my first experience with a UNICOM facility.



UNICOM Snafu

Photo alteration by Allan Amen

The destination field was equipped with an automated weather-broadcast system, an ILS approach, and an 8,000-foot runway. The weather was VFR with no ceiling, and visibility was more than 5 miles. The winds were reported calm.

We were talking to an approach controller in a nearby metropolitan area who could clear us for a normal visual entry to the field or the ILS approach. The ILS approach was for runway 5, and we were coming from the north. This approach required a long setup.

With the weather reported good, we elected to request the visual approach. I knew I needed to make a number of calls on UNICOM, and the first call should come from a significant distance out (the *AIM* says 10

The controller cleared us to his minimum vectoring altitude of 2,000 feet and told us to report the field in sight. Because the winds were calm, we planned a straight-in to runway 23. I reported our intentions on UNICOM at about 8 miles and still heard no reply. The actual slant-range visibility through a haze layer was more like 3 miles, so by the time we saw the field, we were too high for a safe approach to runway 23. Once we reported the field in sight, the approach controller cleared us to proceed visually and to switch frequencies.

We listened to just the UNICOM frequency. I reported on UNICOM that we were at the upwind numbers for runway 5 and were making a teardrop entry to a left downwind. No replies from anyone.

miles). At 15 miles, I called on our second VHF radio and reported my call sign, position and that I was inbound to the field. I quickly found out the first limitation of UNICOM frequencies. Many fields use the same UNICOM frequency, so we were hearing communications for other fields, some as far as 200 miles away. In other words, the frequency was cluttered. If anyone is working the landing pattern at the destination, they are supposed to inform the inbound aircraft of which runway is in use. No one replied to our initial call, nor for that matter, to any of our subsequent calls.

I called the 180. As we turned off the 180, we quickly found that we were looking directly into the rising sun and, with the haze layer, we lost sight of the runway. We overshot the runway and the aircraft commander decided to wave off. The winds were calm, and there didn't appear to be anyone else around the field, so we decided to continue for a left downwind for runway 23. I called we were entering a left downwind.

I again made a 180 call. At about the 90, we noticed on TCAS that there was an aircraft on the ground at the field. To appear on TCAS, an aircraft must be squawking

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Almost a Blue-

by LCdr. Michael Miklaski

How many of us have a cross-country tale where a good deal turned into a nightmare? Most cross-countries live up to our expectations, but every once in a while, something turns so bad that we have to stop and assess just what caused it to go wrong. This is a story about one of those flights.

I consider myself lucky to have a wife who lets me do cross-countries on a regular basis. When you're stationed in Japan, the cross-country locations are decent. The caveat was that I had to buy some nice (read expensive) trinkets or complete 75 percent of the shopping list she handed to me at the door to keep my good-deal meter running. This particular trip was to Osan, and, fortunately, I still had enough in the bank account to meet the demands of the agreement.

This flight was to be an easy, relaxing hop—just ring out the back end while the pilots got their instrument nav checks. After an uneventful trip out to Osan, we refueled and secured our Hawkeye, bagged some lunch, and headed out the main gate for shop-till-you-drop ops.

The next day, after completing our secondary mission, we had the goodies brown-paper wrapped at the pack-and-wrap. After depositing the larger items at the post office for the free ride home (a benny of being overseas: free mail), we headed back to the plane. The preflight planning and crew briefing went smoothly. As we briefed crew duties during engine starts, we decided I would be the lucky one to draw the job of plane captain. When an E-2 goes on a cross-country, one of the NFOs usually functions as a plane captain to ensure that everything is done correctly, particularly when at another service's base. This duty includes briefing the ground crew on our start procedures, what to expect and when, and what to do in an emergency.

We told the airman at base ops that we needed a ride to our aircraft and asked him to tell the ground-maintenance personnel to meet us at the aircraft for the start. As we pulled up to the aircraft, I noticed that the start-cart was positioned exactly where we asked it to be placed,

outboard the starboard nacelle, with the exhaust positioned behind the wing. The electrical cart was just behind, with all the connections made. An Air Force sergeant approached us as we got out of the truck and introduced himself as the entire start crew. He apologized that he was the only one, but because there was an exercise going on, all the others were working elsewhere.

The first thing I noticed about him was that he was about 6 feet 5 inches tall. The next was that he wore only a T-shirt, cammie pants, yellow sun glasses, and had his Mickey Mouse ears around his neck (no cranial).

As the rest of the crew started preflighting, I briefed him. Walking him around the aircraft, I described the entire procedure. First, we would start the starboard engine, then he would have to pull the air hose, then move the air cart to the port side and do it again, finally returning to the starboard side to remove the electrical cords. I walked the dog with all the hand signals. He assured me he would be looking at me during the entire start sequence.

Most importantly, I instructed him on how to approach the nacelle. I directed him to walk down the wing line until he reached the nacelle, then duck underneath the exhaust, and proceed forward into the wheelwell to remove the hose. Next, he was supposed to go to the fuselage electric-power receptacles and remove the plugs, then exit the area in reverse order. He listened intently as I emphasized that under no circumstance was he to approach the exhaust or the props. The sergeant dutifully acknowledged that he understood the consequences of not heeding my warnings.

While I was briefing him, I asked if he had ever worked around props before. He said that he had, around C-130s, but not with an aircraft where the props were so close to the ground, nor where he would have to approach them so close. I assured him that if he heeded my words of wisdom, nothing would go wrong. He then donned his hearing protectors and yellow sunglasses and manned the air cart.

Suit Julienne



The starboard-engine start went like clockwork. I directed the sergeant to remove the air hose; he acknowledged and started to work his way toward the nacelle. As I kept a wary eye on him, he did exactly as instructed, removing the air hose and moving out of the nacelle. All the time, I could see he had one eye on the prop, which was good; at least I was sure he wouldn't walk into it. Fear is sometimes a good thing.

He then moved the air cart to the port side and duplicated the procedure. When both engines were turning, he moved the cart out of the way and returned to the starboard side of the aircraft to remove the power cord and move the electrical cart.

The PIC directed the removal of the power cords, which I acknowledged and telegraphed to the sergeant. He rogered the signal and this is where time shifted to slow motion. For some reason, he picked up a brisk pace toward the engine about four to six feet behind the wing. I could tell he had no intention of ducking underneath the engine exhaust. I guess he was confident after having approached the engines twice. I tried to get his attention, but he wasn't looking at me. All I could do from that point was watch.

When he finally reached the exhaust flow, in the full erect position, it looked as if someone had punched him in the head. His head went straight back and his feet got airborne in the opposite direction. He hit the ground and started rolling aft, with his Mickey Mouse ears and sunglasses tumbling ahead of him, being blown toward a grassy area just behind the E-2.

I signaled the pilots to stand by and ran around the starboard wing and then aft toward the sergeant. By the time I reached him, he was hunched over covering his eyes. I moved him out of the exhaust area and went after his glasses and ears. When I returned, he was rubbing his eyes and was complaining about them burning. This is when I got a good look at his face. Most of his hair was singed, his eyebrows were all but gone, and his eyes were red from the heat and fumes.

After a few minutes, he assured me he felt good enough to get back to his work center on his own. I recommended he go to the first-aid station instead. I found out later that he wasn't injured.

When I finally got in the E-2 (I had to close the main entrance hatch myself, seems he didn't want to approach the port engine again), I told the crew about the incident. The pilots initially thought there might have

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My Exploding-Head Ride

by 1stLt. John R. Gregory

As an intermediate student, I never thought I would write an *Approach* article so early in my aviation career. I have read many valuable and interesting articles while waiting in the ready room, but I did not believe I would have a learning experience I could contribute to the naval-aviation community.

I went with a group of 30 students and instructors on a two-week "gun" detachment to NAS El Centro right after returning from Christmas break. Most of us students were in late-stage forms, going through as fast as we could to get to the gun stage. I finally hit guns at the beginning of my second week, and by mid-stage, I was feeling very confident of my progress through the gun pattern.

Since our arrival at El Centro, students had been steadily going med-down for colds probably because of the change in humidity, the close proximity in which the students worked, or both.

On Tuesday of the last week of the det, I felt like I was beginning to get congested, and I hoped I was not coming down with the same cold many of the students already had. It did not seem to affect my flying that morning, so I did not worry about it.

On Wednesday I felt slightly more congested but still well enough to fly. After finishing the gun pattern, I was coming back to home base in a two-plane formation. As we were coming down through 5,000 feet, I began having problems clearing. I immediately told my instructor we needed to break off from the formation to take my mask off to clear my sinuses.

We circled at the initial until I finally cleared my sinuses. Then we began a slow descent toward the field. We came into the break and landed with no further problems, other than a slight headache from the built-up pressure in my head.

After the debrief, the instructor and I decided not to push it any harder that day and canceled an OCF flight that I was scheduled for later that afternoon. I decided to return to the hotel to try to get some rest and to prevent my congestion from turning into a cold. I did not want to go med-down as I was almost done with guns and felt I had a good grasp on the pattern. I also did not want to delay training for a minor cold. That was my first mistake.

The next day, I had my gun-six check at zero-dark-thirty in the morning. I felt well-rested, but my nose was

still congested. Completing the check ride was the only thing on my mind, so I pressed on. The gun pattern went all right, but as we came back to El Centro and started our descent for the initial, I felt pain in my left forehead—like the day before but more severe. We were flying a tight, Dash-4, parade position, and I decided to take my mask off and clear as I had done the previous day, but with one minor difference: I did not tell my instructor. This was my second mistake.

After repeatedly clearing my sinuses and being told by the instructor (who had no idea what was going on in the front seat) to return to a tight parade position, we leveled off at carrier-break altitude of 800 feet. I felt that my sinuses were now clear, but I had a throbbing in the left side of my head. I did not think it was serious. I still had my mask off, and I decided to leave it off and fly good form. After the break, I could easily put my mask back on, or so I thought.

Lead kissed us off, followed by -2 and -3. Six seconds later I broke and set the G's. Immediately, I felt like someone had stuck a white-hot poker in my left eyeball. It felt as if all the fluids in my nose and sinuses had flooded to the left side of my head, and I felt a pop in my left ear.

The altimeter read about 850 and climbing, but I could not see it very well; my right eyeball felt like it was being forced out of its socket. Then I realized I should immediately tell the instructor that my head felt like it was about to explode and that I could not see. I could not fly the aircraft while putting the mask on, as well as trying to key the mike with just two hands. Trying to talk to my instructor in this condition was my third mistake.


After about two seconds, the instructor took the controls, leveled the wings, got back to pattern altitude and came in for a full stop. We landed with no other incidents and as we were taxiing back to the hangar, my only concern was the throbbing pain in the left side

of my head. It was not until after a thorough debrief, and after I had a chance to sit down and think about what actually happened, that I realized how close I had come to starring in a Class-A mishap. Apparently, the instructor had taken control with the aircraft in a 100-degree AOB, passing through 500 feet.

My first mistake was trying to push a head cold. I am not a doctor, but I should have realized that any congestion might worsen. When I had trouble clearing my nose the previous day, I should have known I'd need medication to return to 100 percent. If I'd have taken 10 minutes to see the flight surgeon, things would have probably gone differently.

My second mistake was not telling my instructor that I had trouble clearing again. I was flying with the same instructor as the previous day, and he knew about my condition. It would have been simple to use a little crew coordination, something that has been hammered into all of us throughout flight training, and let him know again that I was having trouble.

My third mistake was not flying the aircraft when my head was about to explode. I should have let the G's out by leveling the wings. Relaxing the turn would have probably relaxed the pressure inside my head. But even if it did not, my blazing head would have been a lot less severe than becoming a blazing fireball at the end of the runway.

When I finally made it into medical later that day, the flight surgeon said I was lucky to come out with a popped blood vessel in my left ear and a slightly detached membrane from my left sinus. It was only after the debrief that I learned from the instructor where the aircraft was when he had taken control. I later calculated that in a 4-G, 100-degree bank at 500 feet AGL, I had about six seconds before crashing. 

1stLt. Gregory is a student with VT-9.



What's a Wipeout Look Like Again?

by Ltjg. Nathan Norton

Being a West-Coast squadron based on the East Coast presents unique challenges in preparing for deployment. After ferrying our 10 aircraft from Oceana to North Island (during the Christmas holidays), staging and moving all our gear from C-130s to the boat, then transporting all our people across country, we still had to bounce and CQ before the CVN got underway.

Holding the coveted status of most junior JO, and therefore most junior RIO by default, I was assigned to do all of my flying with our brand-new XO, which made me nervous at first. My apprehension quickly faded as our crew coordination and habits gelled. It felt good to be back flying after holiday leave and a lengthy POM period. We flew three uneventful bounce periods at NAF El Centro before it was showtime.

As a junior JO, I rode the C-9 out to NAS North Island, walked aboard the CVN early the next morning, and then manned the duty desk during the initial fly-on and CQ. I tried reviewing as many CV NATOPS procedures as possible.

The next morning, the XO and I briefed for our day CQ hop. Our day requirement of two touch-and-goes and two traps should have been easy because most of the wing's aircraft had not yet flown on.

Approaching the cat, we went through our single-engine procedures and repeated, "Cat one, cat one, cat one," over the ICS just in case we might have to suspend. It felt like years since our last work-up period, and I was trying hard to keep abreast of all the activity on the flight deck.

I rogered the 58K weight board as the XO finished his takeoff checks. The wings were out, the flaps came down, and it was time to run up the engines. Over the roar of our TF-30s, I heard the XO begin to methodically step through the wipeout.

"There's forward..."

I swung around to glance back at the horizontal stabs.

"Aft..."

I saw the stabs peek up above the wings.

"It doesn't feel like we're getting enough aft stick," the XO quickly reported. Once again, I looked back and could see the stab popping up from behind the wing.

"Stabs are coming up, sir..."

"Suspend!" he shouted.

I frantically broadcast to tower, "Suspend cat one! Suspend cat one!"

Following our director, we throttled back and did some quick troubleshooting. The XO asked, "Are you sure the stabs were coming up enough? It just didn't feel like we had the normal stick authority. It felt like we were only getting about fifteen to twenty degrees."

I replied, "Sir, the stabs are coming up. Whether it's enough is hard to tell, but you definitely had some authority back there."

We decided to give it another try. Again, the power came up and the XO started through the wipeout.

"Forward...aft..." I saw the exact same amount of stab as before.

"Left..."

"Four left!" I called, watching all of the left spoilers pop up.

"Right..."



"Four right!" I reported.

"Left rudder...right rudder." The flight-deck troubleshooters were all giving the shooter a thumbs-up. "Well, everyone says we're good to go. Ready?"

"All set," I replied.

Everything up to this point had looked fine to me, but at the end of the cat stroke, we both knew something was terribly wrong. My eyes were now glued to the standby gyro and altimeter. We had 10 degrees of attitude, but the altimeter was barely climbing. By the time I could sputter, "Altitude!" the XO was already shouting, "I got it! I got it! I got it!"


The altimeter slowly climbed through 30, then 50 feet. After a couple of choice four-letter words, we slowly turned crosswind, climbing to 600 feet to enter the CQ pattern. After we trapped, we taxied out of the landing area and immediately signaled to the flight-deck coordinator that the jet was down. After a quick hustle by ops and maintenance, we were in another jet.

Again, we taxied to cat 1 and went through the takeoff checks. This time, the wipeout looked surprisingly different. I looked back and saw a full 33-degree deflection. The stabs weren't just peeking up from behind the wing; they were blocking my view of the JBD. Our earlier decision to launch had been a huge mistake.

First, while I had checked to see that the stabs were moving, I didn't really have a good idea of how a proper wipeout looked. Sure the stabs were moving, but what did 33 degrees really look like? I had been watching, but not really analyzing, the control surfaces as they moved.

Second, there is no excuse for not knowing NATOPS. As soon as the XO said he was only getting 15 to 20 degrees of aft-stick authority, bells and whistles should have been going off in our heads. I learned later we had only been getting 16 degrees of authority, not even half of the normal 33 degrees. Sitting on the cat in tension is not the time to discuss limits and NATOPS trivia. It is in the rare instances like this when all the hours in the big blue book pay off.

Lastly, we let others pressure us into taking a jet flying that had some serious, albeit insidious, problems. An experienced flight-deck crew thought we had a good control check, but, as the saying goes if there's doubt, there is no doubt. It just didn't feel right. We made a bad decision and almost paid for it.

A postflight inspection found that a horizontal-tail authority stop had failed in the wrong position, resulting in the limited stab authority. Incidentally, the same problem occurred in our second jet after a subsequent trap. 

Ltjg. Norton flies with VF-211.

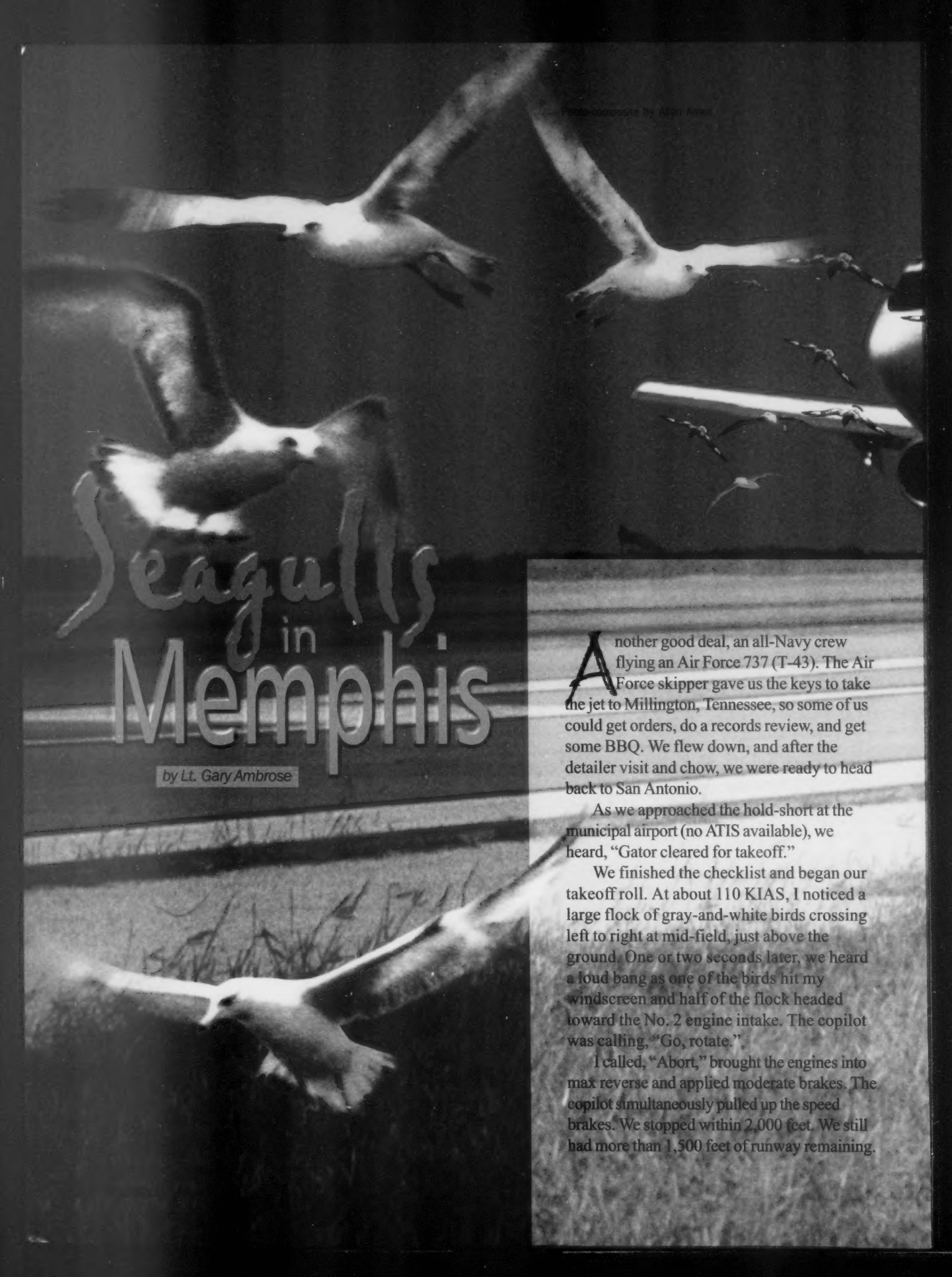


Photo-composite by Allan Amen

Seagulls in Memphis

by Lt. Gary Ambrose

Another good deal, an all-Navy crew flying an Air Force 737 (T-43). The Air Force skipper gave us the keys to take the jet to Millington, Tennessee, so some of us could get orders, do a records review, and get some BBQ. We flew down, and after the detailer visit and chow, we were ready to head back to San Antonio.

As we approached the hold-short at the municipal airport (no ATIS available), we heard, "Gator cleared for takeoff."

We finished the checklist and began our takeoff roll. At about 110 KIAS, I noticed a large flock of gray-and-white birds crossing left to right at mid-field, just above the ground. One or two seconds later, we heard a loud bang as one of the birds hit my windscreen and half of the flock headed toward the No. 2 engine intake. The copilot was calling, "Go, rotate."

I called, "Abort," brought the engines into max reverse and applied moderate brakes. The copilot simultaneously pulled up the speed brakes. We stopped within 2,000 feet. We still had more than 1,500 feet of runway remaining.



In the T-43, we are very "go" oriented. Our takeoff brief says that after 80 KIAS, we only abort for fire, engine failure, or a condition that makes the aircraft unsafe for flight. Seeing all the birds diving for No. 2's intake and not being sure whether the windscreen was cracked, qualified for the "unsafe for flight" part.

The high-speed abort in itself was no big deal. We only practice them in the simulator once a year, but this keeps us all proficient. The part I thought interesting was how, as we taxied back in for an inspection, the FBO lineman asked if we had hit some seagulls. I wondered if he had ESP and asked him how he knew that. He said, "They are all over this place. People have been hitting them a lot lately."


I thought that bit of info would have been nice to know earlier in the day (although it probably would not have changed the outcome). That's when I thought about the migratory bird information posted in Base Ops. You know, the stuff on the wall you look at but don't ever read.

After a thorough inspection, we determined that while no birds had gone down the intakes, they had struck the main gear. After scraping

off bird carcasses, we ran the motors to high power and departed without further incident.

On the way home, I thought about the next time I would fly into a small airport without ATIS. I would do a little more research about the field, including bird conditions. I also reflected on the importance of good ORM. Even though we would have normally continued our takeoff for a bird strike after 80 KIAS, the severity and location caused both pilots to think abort, even though we were just at refusal/rotate speed when the strikes occurred.

Lt. Ambrose was flying with the 562nd FTS at the time of this incident. He has just reported to VPU-1.

The USAF BASH web site (www.afsc.sai.af.mil/AFSC/Bash) provides historical information on bird migration tracks and high-risk periods. Another new web site developed by the USAF, which is just coming on-line, gives real-time alerts, using NEXRAD radars. Reports of large-scale bird activity in areas of the continental U.S. are posted hourly (www.ahas.com). Use these sites in your planning.—Ed. 

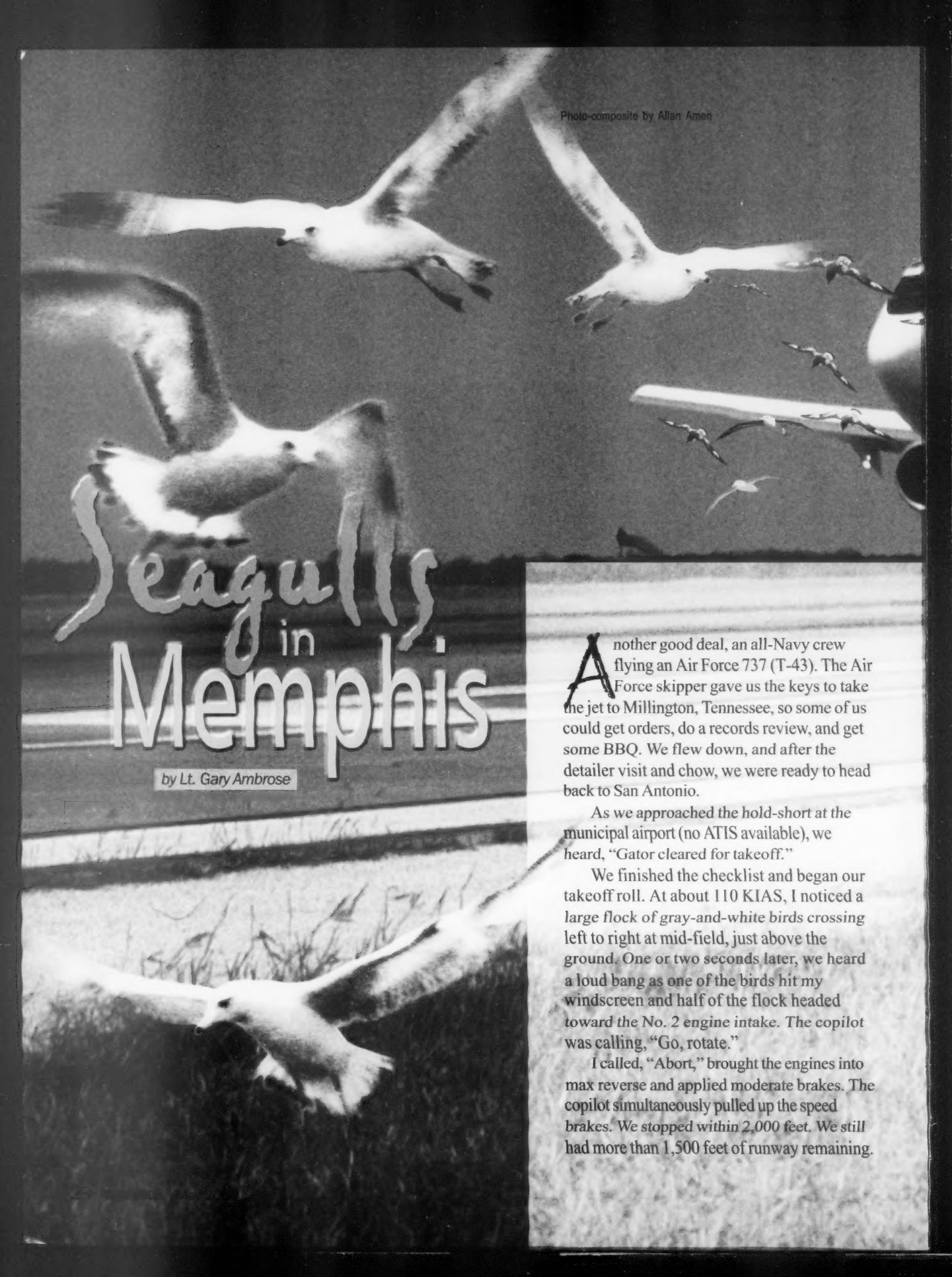


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Curbside Service at Kuwait International



Our scheduled SSC mission in the Northern Arabian Gulf changed even before we jumped into the helicopter. We were called to do a medevac from a British frigate steaming in company with our own. One of their crew had a kidney problem that required immediate medical attention. It didn't take long to prep ourselves and our SH-60B for the mission.

After completing a hot-pump and crew swap, we sat turning on deck for quite a while, waiting for diplomatic clearance into Kuwait. In the meantime, we coordinated our plan of action with the other ship. We discussed the

Photo-composite by Allan Amen

patient's needs, our approach and pickup, and who would ride to Kuwait.

Two major factors quickly arose during our planning. First, because of the size and weight limitations of their flight deck, we could not land. Second, the sun was quickly setting, and we wanted as much daylight as possible. The plan changed several times as we sat there. It changed again after we lifted, requiring us to land and pick up an extra crewman.

When we did so, the HAC considered replenishing the fuel we had burned during the long wait. However, the refueling team was not manned, and the entire sequence would have been too time-consuming. Daylight was running out.

Perhaps foregoing fuel was a good thing. When I finally made the approach to a hover over the deck, I noted my engine instruments approaching their max continuous limits. Had we been any heavier, I doubt I would have been able to safely hover for the amount of time that we did. Nevertheless, fuel would become an issue later in the flight.

The pickup itself went smoothly. The patient was strapped into a rescue litter for the ride up the hoist, but was seated for the flight. His doctor came along with him. The whole process took two approaches and was completed just as darkness began to spread over the Gulf.

On the flight to Kuwait, we went over our fuel calculations repeatedly. Land was about 70 miles away, and the rescue had used more fuel than we expected. The HAC decided we would return overhead with sufficient fuel, as long as there were no delays at the end of the flight.

After some difficulty raising Kuwait Approach, we finally got switched over to tower. Upon landing, the Kuwaitis told us to taxi to an unoccupied tarmac where we would be met by a medical team. When we stopped, we secured one engine to save gas. There was no one there to greet us. Both crewmen got out to speak to uniformed personnel nearby. It seemed like they were not getting much

information, so we made a call to tower. Just then, something black filled my peripheral vision to the right. The HAC immediately saw the same thing. We both sat stunned to see that a covered pickup truck had just driven under the rotor arc of our turning helo! I'll leave to your imagination what we said next.

One of our aircrewmembers took charge and tried to wave him away. I did the same. The truck was facing the same direction as the helo. It was dark outside, and I couldn't see the tip path of the rotor blades. As he drove off—straight forward!—we pulled back and left on the cyclic and prayed he didn't get whacked. At the last second, he turned away to the right instead of continuing toward the lowest part of the tip path. After a few deep breaths, we calmed ourselves and returned to the mission at hand.

We delivered the patient to our friends in the black truck, started the second engine, then departed. We flew back at max range airspeed, arrived overhead homeplate with plenty of fuel, and landed.

What could we have done differently? We discussed this at length during the long flight back. Fuel was not available at the airport, or else we would have got it. We calculated our fuel and watched it like a hawk. Not much we could have changed there. As for the truck, perhaps we should have assigned one crewman as plane captain while the other made the patient transfer. It is doubtful the driver would have seen him or even heeded him that night, but it would have been a good idea.

Another option would have been to shut down the helo since the truck was parked so close to our helo. But things happened so quickly that our first reaction was to wave him away.

— That's LAMPS for you—Learning from A Mighty Precarious Situation. Count on the plan changing when you least expect it. Keep your head on a swivel, especially in a strange place, and always rely on your wits and your training.

Lt. Green flies SH-60Bs with HSL-42.

mode C, so we guessed he must be getting ready to take off. All three crew members in the cockpit began looking for the aircraft on the ground. I knew I was supposed to make a call on final, but I didn't because of the distraction of looking for the aircraft on the ground.

As we touched down on runway 23, I saw a light, single-engine aircraft pull out and line up for takeoff on runway 5! I told the aircraft commander, who did a maximum-braking stop. We didn't know if the other pilot saw us and whether he would start his takeoff roll directly toward us. As it turned out, he did see us, and he exited the runway.

We turned off at mid-field, and as we left the runway, we heard the first call on UNICOM from our destination field.

The pilot of the other aircraft said, "Don't you know how to talk?" Since I had made numerous radio calls, I was confused and simply said, "We made a few calls. Sorry you didn't hear us."

He replied, "Well, I saw you go around from runway five, but never heard anything." He then took off without making any further radio transmissions.

Here are few lessons if you are going to a field with UNICOM.

1. Standard calls from aircraft approaching a field are at 10 miles, entering downwind, turning base and turning final.
2. Civilians don't know what a 180 is. You need to use civilian terms of turning base and turning final.
3. Standard calls for taking off from a UNICOM field are: "Taxiing for runway ____," and "Taking runway __ for takeoff."
4. UNICOM frequencies are very clear on the ground because you won't hear calls at other fields. In the air, UNICOM is quite congested, and you will have to listen closely to hear calls for your destination field.
5. If the winds are suitable (calm in this case), most pilots will use the runway appropriate to their direction of flight.
6. These operations are strictly see and avoid. Civilian aircraft may operate VFR from these fields without a radio, much less a transponder with Mode C. The UNICOM frequency is an aid to the see-and-avoid doctrine.

I am sure the civilian pilot in this incident never made a radio call that he was taking the runway, because we were close enough to have heard him. The calls he made after the incident were loud and

clear. The time from startup to takeoff for a light civil aircraft can be short, so he probably didn't even have his radio on to hear our calls before the waveoff for runway 5. I think he saw us wave off from runway 5 before starting his engine and assumed we would return for runway 5. He may have heard our 180 call for runway 23 but didn't know what that meant.

While taking the duty, he probably listened for a call from us on final and looked at the approach end of runway 5, assuming that's where we would be. The fact that I omitted the call that we were on final for runway 23 didn't help the situation.


A light civil aircraft at 1.5 miles (the other end of the runway) is hard to see, particularly since it was a white airplane against a white concrete background. The TCAS information telling us that he was squawking helped increase our vigilance for traffic on the surface, but couldn't tell us where on the surface he was. We should have reviewed the UNICOM procedures in AIM before we left on this flight, which would have helped with the non-standard "180" radio call.

LCdr. Lane flies with VR-56.

Turning on the radio is usually part of the pre-takeoff checklist for most civilian aircraft, although pilots usually turn it on before they taxi, if only to listen for other aircraft in the air and on the ground. Of course, at a controlled field, the radios have to be on to talk to ground control.

Most civilian pilots adhere to their checklists with the same dedication as their military brethren. There are, of course, always the few who bypass parts of their checklists. This civilian pilot could be one of them, but for the most part, following checklists is as much a part of civilian flying as it is for those in the military.

Without ground and tower controllers, operations at an uncontrolled field can get sloppy because everyone is left to himself to clear the approach corridor of the runway he intends to take.

The burden was certainly on the people in both aircraft to check for traffic. Of course, the C-9 on final did have the right of way. Check Federal Air Regulations 91.113. The Airman's Information Manual, 4-1-9 also has good information about operating in airports without control towers.—Ed. 

Continued from page 23


been a fire in the right engine because of my hasty departure. However, they didn't have a fire light, that I hadn't gone for the fire bottle and was last seen running past the engine. Still, because they couldn't see, they had no idea what was happening. I had no way or time to let them know exactly what was going on.

A few weeks later, a different crew returned on another good deal flight, and I asked if the sergeant was OK. The other ground crew members said that he was, but he had no intentions of starting any more E-2s. Can't say that I blame him.

Now, whenever I go on cross-countries, I insist on more than one person as a start crew, and always use this story to emphasize the importance of respecting turboprop engines and exhausts. I still wonder today if I could have prevented this incident. Had this sergeant been wearing a cranial, eye covers, and a

long-sleeved shirt, he might have avoided the injuries he received, despite his lapse in judgement. Everyone must respect a turning aircraft engine. That's why we paint those nice warnings at the intakes and exhausts. We need to heed those warnings regardless of service, particularly if it has a huge food processor on the front of the engine.

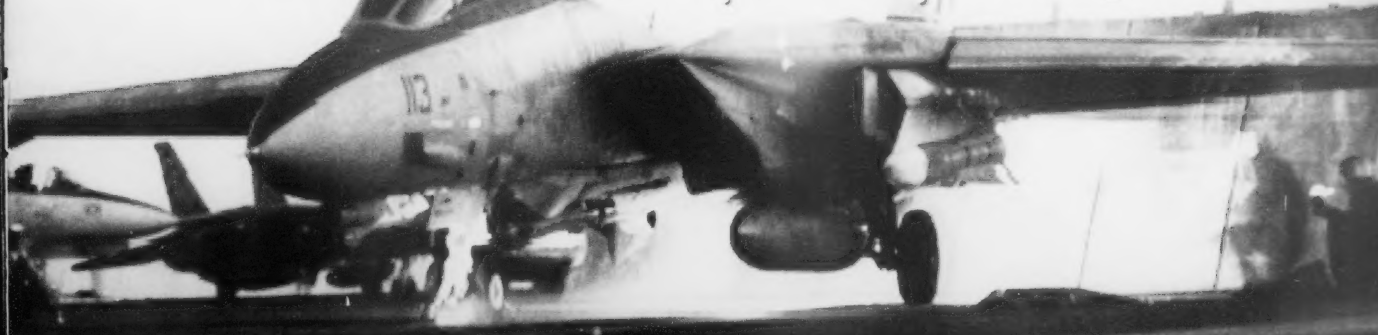
LCdr. Miklaski flies with VAW-115. At the time of this incident, he was a first-tour JO.

We can all re-learn the dangers of working around unfamiliar aircraft. Although this story concerns an Air Force-Navy setup, how many times have you seen a Sailor or Marine walk into danger, even though he knows the consequences. It happens, and we always need to be on guard, ground and flight crews—Ed. 

On Cat 1

Coming Attractions for June

- Don't Worry About That C-7 in Front
- Do You Smell Smoke?
- Our Massive Prop-Overspeed Flight



BROWNSHOES IN ACTION COMIX

"The kind real aviators like"

by Cdr. Ward Carroll

CAG, do you think the VIPs noticed the bombing demo dropped a bit too close to the carrier?

Well, here comes one of them now...



What did you think of the air show, Mr. Secretary?



Very impressive!



Check this out, shipmates.

It's totally cybergouge!



Visit Dangerboy and the rest of the Browns shoes gang on the web at www.safetycenter.navy.mil

